

# THE DER WEEKLY

[www.eren.doe.gov/der](http://www.eren.doe.gov/der)

Vol. 2 No. 42

October 19, 2001

## Industry News

### TVA Starts Construction on Storage Project

The Tennessee Valley Authority (TVA) held a groundbreaking ceremony in Columbus, Mississippi, on October 15 to officially launch construction of a new energy storage plant. The facility will store electricity using an electrochemical technology that resembles a battery, and deliver it to customers during peak demand periods. The unit will store up to 120 MWh of electricity and provide power for 10 hours. During periods of low demand, the plant will be charged by using power generated elsewhere. Regenesys Technologies Ltd., a United Kingdom company, developed the storage technology and designed the plant, which is expected to begin operation in 2003 and cost approximately \$25 million.

*TVA Press Release, October 15; Electricity Daily, October 17*

### H2fuel Developing New H<sub>2</sub> Extraction Process

H2fuel, LLC, an affiliate of Avista Labs that develops hydrogen extraction and purification technologies for the fuel cell industry, is developing a new membrane-based technology. The process eliminates carbon dioxide and carbon monoxide from natural gas and propane, creating nearly pure hydrogen. This new approach is expected to be less expensive than other methods.

*Avista Press Release, October 17*

### Plug Power to Deliver 125 Fuel Cells in 2001

Twenty Plug Power 5-kW fuel cell systems are providing electricity to a variety of New York State facilities and 21 additional systems are to be installed by year end. In addition, 75 will be delivered to the Long Island Power Authority and 10 to the U.S. Army's Watervliet Arsenal. Plug Power's goal for this year is to deliver between 125 and 150 proton exchange membrane systems. The state said the 41 systems are the third and final phase of a \$6 million, two-year demonstration program it manages for the New York State Department of Environmental Conservation.

[www.plugpower.com](http://www.plugpower.com)

### American Superconductor and GE Receive D-SMES Order from TVA

American Superconductor Corporation and GE Industrial Systems announced last month that they have received an order from the Tennessee Valley Authority (TVA) for a Distributed Superconducting Magnetic Energy Storage (D-SMES) power grid reliability solution. The D-SMES solution for TVA will be deployed in the TVA power grid in November 2001. The

installation is the tenth American Superconductor DSMES unit to be installed since July 2000. American Superconductor's other D-SMES customers are Wisconsin Public Service, Alliant Energy, and Entergy.

*American Superconductor Press Release, September 11*

### H2Gen Innovations Raises Funds for HFA™

H2Gen Innovations Inc. announced earlier this month that it has raised \$4.7 million initial financing from six investors to complete development and begin fabrication, testing, and marketing of the company's HFA™ hydrogen fueling appliance. These small-scale appliances produce at least 99.99% purity hydrogen on-site from either natural gas or propane, providing the optimum fuel for either stationary or mobile fuel cell systems. The company estimates that hydrogen produced by their novel fueling appliances will be cost-competitive with untaxed gasoline per mile driven when used in fuel cell vehicles.

*H2Gen Press Release, October 1*

## DOE News

### National Energy Security Briefing

National energy security was the subject of a briefing conducted by the Environmental and Energy Study Institute on October 4, 2001, at the Dirksen Senate Office Building. Senator Susan Collins (R-ME), sponsor of the meeting, called for increased energy efficiency, diversification of supply, application of modern technology to transmission lines, and encouragement of distributed energy resources. These sentiments were echoed by Richard Truly, Director of the National Renewable Energy Laboratory, and Richard Cowart, Director of the Regulatory Assistance Project. The key to energy security is essentially the same as the key to reliability of affordable energy supply: a robust grid with increased demand elasticity. According to Cowart, expanded reliance on demand side resources will strengthen energy security.

### ASERTTI Meeting Wrap-Up

Representatives from Oak Ridge National Laboratory (ORNL) and the Chicago Regional Office (CRO) attended the Association of State Energy Research and Technology Transfer Institute's (ASERTTI) Fall Meeting in Chicago, Illinois, on October 10-12, 2001. In attendance were Mike Karnitz, Tom Rizio, and Patti Garland from ORNL and Peter Dreyfuss from

*(Continued on page 2)*

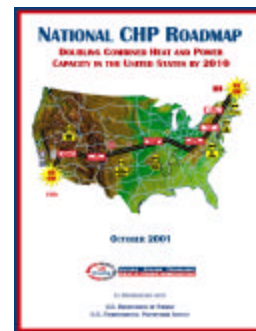
*The New York Power Authority (NYPA) and Ford's electric vehicle group, THINK Mobility, have announced a new commuter station car demonstration, NYPA/THINK Clean Commute.\**

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*The DER Weekly, October 19, 2001*

### National CHP Roadmap Workshop – One Year Later

*The National CHP Roadmap Workshop–One Year Later* was held October 16-17 at the Pier 5 Hotel in Baltimore, MD. The workshop was a follow-on to last year's conference, which produced the *National CHP Roadmap: Doubling Combined Heat and Power Capacity in the United States by 2010*. Rob Brenner, Deputy Assistant Administrator for Air and Radiation at the U.S. Environmental Protection Agency (EPA), kicked off the event on October 15 at EPA Headquarters by formally announcing EPA's National CHP Partnership Program. Through the CHP Partnership, EPA will provide technical assistance, public recognition, and regulatory guidance to facilitate new CHP development in the U.S. The workshop in Baltimore included status reports on CHP activities in industry, buildings, district energy, and Federal facilities. Panel discussions on regional and state CHP activities took place, and national and state policy issues such as interconnection, tax treatment, and environmental permitting were discussed. Participants met in small groups in one of three areas (Raising CHP Awareness, Eliminating Regulatory and Institutional Barriers, or Developing CHP Markets and Technologies) to discuss CHP initiatives for 2002. The workshop concluded with remarks and encouragement from John Hurson, Chairman of Environmental Affairs Committee, Maryland House of Delegates. Presentations and results of the workshop will be posted within the next few weeks on the U.S. Combined Heat and Power Association's (USCHPA's) homepage at [www.nemw.org/uschpa](http://www.nemw.org/uschpa).



the CRO. Distributed energy resources was a featured topic and included the progress of the Midwest Combined Heat and Power Initiative. More than 50 participants from state governments, national laboratories, and Department of Energy program offices attended the meeting, which was hosted by the Energy Resources Center of the University of Illinois at Chicago. The University is the location of the Midwest Regional Cooling, Heating and Power (CHP) Application Center that is run by John Cuttica, University of Illinois. It provides assistance to local entities to facilitate technology transfer and deployment of CHP.

There were several excellent talks and panel discussions. Peter Dreyfuss, CRO Director, delivered the first day's keynote address about distributed energy resources on behalf of Bill Parks, Associate Deputy Assistant Secretary of the Office of Power Technologies. Rich Sweetser, of Exergy Partners, led a panel with three speakers, one from the Northeast, one from California, and one from the Midwest. Each reported on the progress of CHP in his region. State representatives and ASSERTI reported on their activities as well. On October 11,

Bill Flynn of the New York State Energy Research and Development Authority was elected the new ASSERTTI Chair.



The distributed generation portion of the meeting wrapped up with a tour of the University of Illinois-Chicago campus's 44MW distributed generation facility. The new portion includes three advanced turbines, and three reciprocating engines. This facility will come on line in early next year.

### Regional Office News

#### Dedication of Hybrid Wind/PV System

The Manzanita Band of Mission Indians received a U.S. Department of Energy grant to install a hybrid wind/photovoltaic system at their Activity Center in San Diego County. Steve Sargent, Denver Regional Office, is providing oversight for the project, which consists of a 10-kW Bergey wind turbine and a 1.2 kW Siemens photovoltaic array and is connected to the San Diego Gas and Electric Company transmission grid. The system will be dedicated on November 18, as the centerpiece of the tribe's renewable energy fair. The Manzanita have been active in renewable energy for several



10 kW Bergey Wind Turbine

(Continued on page 3)

### By the Numbers

- 20 percent of electricity needs that the U.S. could meet by 2020 using renewable energy resources
- 440 billions of dollars consumers could save by 2020 with improved energy efficiency in appliances and building codes
- 975 number of new power plants (300 MW each) that could be avoided by requiring increased use of renewable energy

According to a study, Clean Energy Blueprint, by the Union of Concerned Scientists, American Council for an Energy-Efficient Economy, and Tellus Institute. ([www.ucsusa.org](http://www.ucsusa.org))



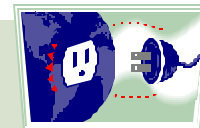
For \$199 per month, New York City commuters may rent the environmentally-friendly vehicles. They can drive them from home and park them at commuter train station lots where they will be recharged.\*

years and recently participated in the Energy Conservation Fair sponsored by the Energy Education Trust of the Southern California Tribal Chairmen's Association. The purpose of the fair was to educate Native American families, businesses, and tribal leaders about renewable energy resources and systems, and energy conservation in general.

### CRO Co-sponsors CHP Workshop

The Chicago Regional Office (CRO) co-sponsored an American Society of Hospital Engineers workshop "Cooling, Heating, and Power Solutions for Healthcare: Optimizing Physical Plant Assets in a Deregulated World" on October 11 and 12 in Chicago, Illinois. The workshop was attended by 30 people and targeted hospital engineers in Michigan, Ohio, Indiana, and Illinois. It addressed deregulation, on-site power generation and heat recovery, integrated and hybrid system solutions, air-side system challenges and strategies, economics, and financing. Gary Nowakowski, CRO Power Team Lead, presented an overview of the CRO as well as relevant energy programs and incentives in Ohio, Illinois, Michigan, and Indiana.

## What's on the Web



# FEMP



**The Federal Energy Management Program's (FEMP) website contains a section on the use of DER in Federal facilities. Several fact sheets and a list of applicants who received funding for the FY 2001 DER solicitation can be found here:**

[www.eren.doe.gov/femp/techassist/der\\_resources.html](http://www.eren.doe.gov/femp/techassist/der_resources.html)

## Calendar of Events

As always, please check with event sponsors to confirm date and location of all events. If your organization's event is postponed or cancelled, contact Brian Marchionini at [bmarchionini@energeticsinc.com](mailto:bmarchionini@energeticsinc.com).

OCTOBER 2001			
22-23	Fuel Cells for Portable Devices	San Francisco, CA	<a href="http://www.f-cellsnetwork.com/NA-1660-01">www.f-cellsnetwork.com/NA-1660-01</a>
24-26	World Energy Engineering Congress and Combined Heat & Power Expo	Atlanta, GA	<a href="http://www.agcc.org">www.agcc.org</a> (CHP Expo <a href="http://www.aeecenter.org">www.aeecenter.org</a> )
24-27	Excellence in Building 2001	Orlando, FL	<a href="http://www.eeba.org/conference">www.eeba.org/conference</a>
28-Nov. 2	2001 IEEE/PES Transmission and Distribution Conference and Expo	Atlanta, GA	<a href="http://www.ieseet-d.org">www.ieseet-d.org</a>
29-30	Reliability-Focused Energy Efficiency Conference: Lessons Learned in 2001	Berkeley, CA	<a href="http://www.aceee.org">www.aceee.org</a>
NOVEMBER 2001			
1-2	3rd Annual International Symposium on Distributed Energy Resources	San Diego, CA	<a href="http://www.cader.org">www.cader.org</a> ; Robert Dixon, Deputy Assistant Secretary, Office of Power Technologies invited to speak
1	U.S. Advanced Ceramics Association Meeting	College Park, MD	Lara Neer; 202-293-6253
1-2	3rd EPRI Powering the Digital Economy Workshop	San Francisco, CA	<a href="mailto:pkeebler@epri-peac.com">pkeebler@epri-peac.com</a> ; 865-218-8015
1-4	World Congress for Hydrogen Economy	Denver, CO	<a href="http://www.hydrogennow.org">www.hydrogennow.org</a>
5-6	Clean Air Technologies 2001	Anaheim, CA	<a href="http://www.aqmdconferences.org">www.aqmdconferences.org</a>
6	NAESCO DG Conference	Miami, FL	<a href="http://www.naesco.org/conference.htm">www.naesco.org/conference.htm</a>
6-7	Empire Energy & Environment Expo	Albany, NY	<a href="mailto:info@eba-nys.org">info@eba-nys.org</a>
6-7	14th NREL Industry Growth Forum	San Jose, CA	Sara Huntly, 303-275-4317

Funding and support for the program come from NYPA, Metropolitan Transit Authority, Metro North Railroad, Long Island Railroad, NYSEDA, Long Island Power Authority, state and city Departments of Transportation, and U.S. DOE. \* **Page 3**

# Calendar of Events

## NOVEMBER 2001

7	Ohio Fuel Cell Technology Symposium	Cleveland, OH	<a href="http://www.cesnet.org">www.cesnet.org</a>
7-8	Demand Response Programs: Results, Status and Future	Washington, DC	Peak Load Management Alliance Fall Conference <a href="http://www.aesp.org/forms/form.cfm?id=14">www.aesp.org/forms/form.cfm?id=14</a>
7-9	NAESCO 18th Annual Conference	Miami, FL	<a href="http://www.naesco.org/conference.htm">www.naesco.org/conference.htm</a>
11-14	113th NARUC Annual Convention	Philadelphia, PA	<a href="http://www.naruc.org">www.naruc.org</a>
12-14	Fuel Cells for Stationary, Automotive and Portable Apps.	Fort Lauderdale, FL	Florida Educational Seminars, (561) 367-0193
14-15	Energy Storage Program Review	Arlington, VA	jblais@sentech.org; Dr. Imre Gyuk (202) 586-1482
27	Illinois Wind Workshop	Lisle, IL	<a href="http://www.eren.doe.gov/cro">www.eren.doe.gov/cro</a>
27-28	Business for Fuel Cells for Stationary Applications	Brussels, Belgium	<a href="http://www.eyeforfuelcells.com">www.eyeforfuelcells.com</a>
28-29	Business Energy Solutions Expo	Orlando, FL	<a href="http://www.aeecenter.org">www.aeecenter.org</a> ; <a href="http://www.tecoenergy.com">www.tecoenergy.com</a>
28-30	DER Conference and Peer Review	Washington, DC	<a href="mailto:cs@energeticsinc.com">cs@energeticsinc.com</a>

## DECEMBER 2001

3-4	4th Business Case for Opportunity and Investment in Fuel Cells	Miami, FL	<a href="http://www.cbinet.com">www.cbinet.com</a>
3-5	Next Generation Turbine and Condition Monitoring Conference and Workshop	Galvestone, TX	<a href="http://www.netl.doe.gov">www.netl.doe.gov</a>
5-7	4th Annual Interactive Energy Conf.	Houston, TX	<a href="http://www.interactiveenergy.com/2001">www.interactiveenergy.com/2001</a>
11-13	Power-Gen International	Las Vegas, NV	<a href="http://www.pennwellevents.com">www.pennwellevents.com</a>
11-12	Workshop on Interconnecting Distributed Generation	Honolulu, HI	mtome@dbedt.hawaii.gov or call: 808-587-3809; <a href="http://www.state.hi.us/dbedt/ert">www.state.hi.us/dbedt/ert</a>

## JANUARY 2002

14-15	Material Technologies for Fuel Cells and Power Electronics	Cocoa Beach, FL	<a href="http://www.ceramics.org/meetings/ECD2002/expo.asp">www.ceramics.org/meetings/ECD2002/expo.asp</a>
28-Feb.1	Distributed Power Program Annual Review Meeting	Arlington, VA	<a href="mailto:kimberly_taylor@nrel.gov">kimberly_taylor@nrel.gov</a>
29-Feb.1	Reducing Your Energy Costs Conference and Exhibit	New Orleans, LA	Stuart Steller, 781-939-2411, <a href="mailto:s.steller@cbinet.com">s.steller@cbinet.com</a>

## FEBRUARY 2002

27-Mar 1	DistribuTECH	Miami Beach, FL	<a href="http://www.pennwellevents.com">www.pennwellevents.com</a>
2	Distributed Resources, Renewables and the Environment	Portland, OR	newsdata@newsdata.com; 503-230-5884 (Bonneville Power Administration)
6-7	Fuel Cell Dynamics: Reality, Not Hype	New York, NY	<a href="http://www.alliedworld.com">www.alliedworld.com</a>
11-13	NASEO 2002 Energy Outlook Conference	Washington, DC	<a href="http://www.naseo.org/events/default.htm">www.naseo.org/events/default.htm</a>
20-22	New and Emerging Technologies Conference	Tucson, AZ	<a href="http://www.nreca.org/edu_events/conferences/newtech/html/conference.html">www.nreca.org/edu_events/conferences/newtech/html/conference.html</a>

## MARCH 2002

17-21	EPRI's 7th Distributed Resources Conference and Expo	Dallas, TX	<a href="mailto:lgoldie@epri.com">lgoldie@epri.com</a>
19-21	Electric Power 2002	St. Louis, MO	<a href="http://www.electricpowerexpo.com">www.electricpowerexpo.com</a>
20-23	Building Energy Conference	Medford, MA	<a href="http://www.nesea.org">www.nesea.org</a> ; 877-44SOLAR, ext. 20